

APPLICANT: **Frank DUIMOVICH, et al.**
SERIAL NO.: **09/825,164**
DOCKET NO.: **26279-002**
CUSTOMER NO.: **29315**

This listing of claims replaces all prior versions and listings of claims in this Application.

LISTING OF CLAIMS:

1. (Original) A method of managing a data access system for transferring data between a server system and a plurality of user sites upon request from said user sites and wherein at least a subset of said user sites comprise performance monitoring agents capable of calculating and transmitting performance data indicative of the data transfer performance of data access systems, said method comprising the steps of:
 - receiving performance data transmitted from said performance monitor agents;
 - selecting a quantity of data received;
 - summarizing the quantity of data received; and
 - storing said summarized quantity of data into a database.
2. (Original) The method of claim 1 wherein the quantity of data selected represents performance of the data access system for a specific time interval.
3. (Original) The method of claim 2 wherein the time interval is 15 minutes.
4. (Original) The method of claim 3 wherein the performance data includes a timestamp means identifying a time when the performance data was observed and

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wherein the step of selecting comprises collecting data that was observed during the same time interval.

5. (Original) The method of claim 1 further comprising, before the receiving step, the steps of

receiving data indicative of the performance of a plurality of data access systems from said performance monitoring agents; and
filtering said data received to pertain to a selected data access system.

6. (Original) The method of claim 1 wherein the performance data is correlated to factors of interest.

7. (Original) The method of claim 1 wherein the server system comprises at least one HyperText Transfer Protocol (HTTP) server.

8. (Original) The method of claim 7 wherein the performance data comprises a summary of performance metrics for a HTTP page.

9. (Original) The method of claim 1 further including the step of using the stored summarized data as a basis for ascertaining quality of service conditions of said data access system.

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10. (Original) The method of claim 1 further including the step of calculating further summarized data using said stored summarized data.

11. (Original) A performance management system for managing a data access system for transferring data between a server system and a plurality of user sites upon request from said user sites and wherein at least a subset of said user sites comprise performance monitoring agents capable of calculating and transmitting performance data indicative of the performance of data access systems, said performance management system comprising:

means for receiving data indicative of the performance of the data access system transmitted from said performance monitor agents;

means for selecting a quantity of data received;

means summarizing the quantity of data received;

means for storing said summarized quantity of data into a database; and

means for utilizing said the stored summarized data as a basis for ascertaining quality of service conditions of said data access system.

12. (New) A performance management system that monitors data transferred between at least one remote site and at least one user site, comprising:

a client that resides on the at least one user site and collects performance data associated with the data received from the at least one remote site; and

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an agent in communication with the client and residing on the at least one user site, the agent being adapted to create preliminary summary data of the performance data retrieved from the at least one remote site, wherein the at least one remote site and the at least one user site do not need to acknowledge each other.

13. (New) A performance management system that monitors data transferred between at least one remote site and at least one user site, comprising:

a client that resides on the at least one user site and collects performance data associated with the data received from the at least one remote site, wherein the performance data is associated with individual web page object retrievals;

a client application associated with the client and residing on the at least one user site, the client application comprising:

a data gathering module that is adapted to capture at least the performance data, wherein the performance data corresponds to at least communication data and application data; and

an agent that is adapted to create preliminary summary data from at least the performance data, wherein the preliminary summary data includes summaries of at least the individual web page object retrievals from the at least one remote site, wherein the at least one remote site and at least one user site do not need to acknowledge each other; and

at least one monitoring server that receives the preliminary summary data from the client application.

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14. (New) The performance management system according to claim 13, wherein the client application is adapted to simultaneously integrate with at least a network level interface and an application level interface.

15. (New) The performance management system according to claim 14, wherein the client application is adapted to combine the captured communication data and application data gathered from the network level interface and the application level interface.

16. (New) The performance management system according to claim 13, wherein the client application is adapted to combine the captured communication data and application data into a single page performance record to link the communication data and application data.

17. (New) The performance management system according to claim 13, wherein the client application is adapted to detect and install an application level interface in web browsers that do not have the application level interface.

18. (New) The performance management system according to claim 13, wherein the received performance data is used to determine overall usage of a data access system.

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19. (New) The performance management system according to claim 13, wherein the received performance data is used to ascertain a quality of service based on an aggregated end user response to a data access system.

20. (New) The performance management system according to claim 13, wherein the received performance data is used to analyze aggregated end user response based on actions taken within a data access system and wherein the aggregated end user response is used to infer end user behavior.

21. (New) The performance management system according to claim 20, wherein the received performance data is used to generate graphical illustrations of aggregated end user response in combination with actual performance within a data access system.

22. (New) The performance management system according to claim 13, wherein the client application is adapted to queue a predetermined number of immediately preceding page performance measurements for transmission or internal assessment.

23. (New) The performance management system according to claim 22, wherein the client application is adapted to transmit the queued page performance measurements when instructed by the at least one monitoring server or in response to the internal assessment.

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24. (New) The performance management system according to claim 13, wherein the client application is adapted to respond to and transmit a configurable number of subsequent page performance measurements based on a set of received rules including a number of pages to transmit or a duration of time to transmit subsequent pages.

25. (New) The performance management system according to claim 13, wherein the client application is adapted to preempt and reset any executing measurement transmission rule based on explicit instructions from the at least one monitoring server.

26. (New) The performance management system according to claim 13, wherein the client application is adapted to request and cache, for a configurable period of time, metrics associated with objects and load operations that correspond to the individual web page object retrievals from the at least one remote site.

27. (New) The performance management system according to claim 26, wherein the objects comprise graphical and non-graphical web page components.

28. (New) The performance management system according to claim 27, wherein the objects comprise images, plug-ins, page frames, applets and cascading style sheets associated with web pages and web frames.

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29. (New) The performance management system according to claim 13, wherein the client application is adapted to transmit predefined performance measurements based on instruction received from the monitoring server.

30. (New) The performance management system according to claim 29, wherein the client application transmits the predefined performance measurements based on metrics associated with at least one of objects and load operations that correspond to the individual web page object retrievals.

31. (New) The performance management system according to claim 29, wherein the client application transmits the predefined performance measurements based on instructions received from the at least one monitoring server for selected objects that correspond to the individual web page object retrievals.

32. (New) The performance management system according to claim 13, wherein the client application is adapted to perform network operations, including diagnostic tests based on instructions received from the at least one monitoring server.

33. (New) The performance management system according to claim 32, wherein the client application performs the network operations triggered by metrics associated with at least one of objects and load operations that correspond to the individual web page object retrievals.

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34. (New) The performance management system according to claim 32, wherein the client application performs the network operations triggered by instructions received from the at least one monitoring server for selected objects that corresponds to the individual web page object retrievals.

35. (New) The performance management system according to claim 13, wherein the client application is adapted to respond to instructions received from the at least one monitoring server for a duration of time.

36. (New) The performance management system according to claim 35, wherein the client application responds to the instructions for the duration of time based on metrics associated with at least one of individual objects and load operations that correspond to the individual web page object retrievals.

37. (New) The performance management system according to claim 35, wherein the client application responds to the instructions for the duration of time based on instructions received from the at least one monitoring server for selected objects that correspond to the individual web page object retrievals.

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38. (New) The performance management system according to claim 13, wherein the client application is adapted to communicate with an end user via a graphical interface.

39. (New) The performance management system according to claim 38, wherein the client application initiates communication with the end user based on metrics associated with at least one of individual objects and load operations that correspond to the individual web page object retrievals.

40. (New) The performance management system according to claim 38, wherein the client application initiates communication with the end user based on instructions received from the at least one monitoring server for selected objects that correspond to the individual web page object retrievals.

41. (New) The performance management system according to claim 13, wherein the client application is adapted to communicate with an end user via a graphical interface based on metrics associated with at least one of individual objects and load operations, wherein the metrics include at least one of an observed set of page performance measurements, wait times, subsequent number of page visits, geography, or domain abandonment.

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42. (New) The performance management system according to claim 13, wherein the at least one monitoring server is adapted to provide the agent with instructions associated with a selected object, wherein the instructions include at least one of measurement requests, threshold values, user geography, user page identification, user Internet service provider, and user hardware.

43. (New) The performance management system according to claim 13, wherein the at least one monitoring server is adapted to reply with instructions associated with selected objects including at least one of measurement requests, threshold values, and an aggregated set of received measurements from a subset of all agents.

44. (New) The performance management system according to claim 13, wherein the client application is adapted to retrieve and alter a current software version residing on the user site based on instructions from the monitoring server.

45. (New) The performance management system according to claim 44, wherein the monitoring server is adapted to determine and initiate software version alterations based on agent-transmitted installation parameters including geography, version information, distribution tag, access speed, and a combination of metrics associated with performance data or user site hardware configurations.

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46. (New) The performance management system according to claim 13, wherein the at least one monitoring server is adapted to collect, aggregate, and display performance data associated with predefined individual objects measured by the agent.

47. (New) The performance management system according to claim 13, wherein the at least one monitoring server is adapted to store, display and determine trends based on performance data that is associated with individual objects measured by the agent.

48. (New) The performance management system according to claim 13, wherein the at least one monitoring server is adapted to collect and aggregate performance data for comparison to predefined performance based threshold settings.

49. (New) The performance management system according to claim 13, wherein the at least one monitoring server is adapted to create, store, and evaluate performance thresholds settings based on at least one of metric values, metric value percentage differences, direct metric comparison with other metrics, historical metric values, and metric value rate of change calculations.

50. (New) The performance management system according to claim 13, wherein the at least one monitoring server is adapted to monitor performance threshold settings and, if predetermined values are exceeded, provide automated user indications including

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f at least one of email alerts, pager alerts, user interface notifications, and network level diagnostic operations.